

Application/Control Number: 09/781,445
Art Unit: 2664

Docket No.: 112063CIP

IN THE CLAIMS

The following listing of claims replaces all prior listings of the claims in the present application:

Listing of Claims:

1. (original) A wireless communication system comprising:

a receiver having an adaptive array, the adaptive array having at least two antennas to receive a signal and produce at least two received signals;

a transmitter having at least two transmission channels for communicating the signal from the transmitter to the receiver;

means for suppressing interference at the receiver by applying an interference suppression technique when combining said at least two received signals; and

means for selecting a channel at the transmitter based on channel performance at the receiver for each of said at least two transmission channels, the channel performance based on a combining technique different from the interference suppression technique.

2. (original) The system of claim 1, wherein the receiver communicates with at least two transmitters.

3. (original) The system of claim 1, wherein the transmitter is a mobile terminal and the receiver is a base station.

4. (original) The system of claim 1, wherein the transmitter is a base station and the receiver is a mobile terminal.

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5. (original) The system of claim 1, wherein the means for suppressing interference applies minimum mean square error combining.

6. (original) The system of claim 5, wherein the means for selecting the best performing channel applies maximum ratio combining.

7. (original) The system of claim 5, wherein the means for selecting the best performing channel applies selection diversity combining.

8. (original) The system of claim 5, wherein the means for selecting the best performing channel applies equal gain combining.

9. (original) The system of claim 5, wherein the means for selecting the best performing channel applies switched diversity combining.

10. (original) A method of wireless communication between a transmitter and a receiver comprising the steps of:

communicating a signal from the transmitter to the receiver, the transmitter having at least two transmission channels;

receiving the signal at a receiver having an adaptive array, the adaptive array having at least two antennas to receive the signal and produce at least two received signals;

suppressing interference at the receiver by applying an interference suppression technique when combining said at least two received signals; and

selecting the transmission channel at the transmitter based on channel performance at the receiver for each of said at least two transmission channels, channel performance based on a combining technique different from the interference suppression technique.

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11. (original) The method of claim 10, wherein the receiver communicates with at least two transmitters.

12. (original) The method of claim 10, wherein the transmitter is a mobile terminal and the receiver is a base station.

13. (original) The method of claim 10, wherein the transmitter is a base station and the receiver is a mobile terminal.

14. (original) The method of claim 10, wherein the suppressing step applies minimum mean square error combining.

15. (original) The method of claim 14, wherein the selecting step applies maximum ratio combining.

16. (original) The method of claim 14, wherein the selecting step applies selection diversity combining.

17. (original) The method of claim 14, wherein the selecting step applies equal gain combining.

18. (original) The method of claim 14, wherein the selecting step applies switched diversity combining.

19. (new) A method of operating a receiver in a wireless communication system, the receiver having an adaptive array comprising at least two antennas to receive a signal from a transmitter

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having at least two transmission channels and to produce at least two received signals, the method comprising:

suppressing interference by applying an interference suppression technique when combining the at least two received signals; and

selecting a channel at the transmitter based on channel performance at the receiver for each of at least two transmission channels, the channel performance based on a combining technique different from the interference suppression technique.

20. (new) A receiver in a wireless communication system comprising:

an adaptive array comprising at least two antennas to receive a signal from a transmitter having at least two transmission channels and to produce at least two received signals;

means for suppressing interference by applying an interference suppression technique when combining the at least two received signals; and

means for selecting a channel at the transmitter based on channel performance at the receiver for each of at least two transmission channels, the channel performance based on a combining technique different from the interference suppression technique.

21. (new) A method of operating a transmitter having at least two transmission channels in a wireless communication system, the transmitter communicating with a receiver having an adaptive array having at least two antennas to receive the signal and produce at least two received signals, wherein the receiver suppresses interference by applying an interference suppression technique when combining the at least two received signals, the method comprising:

receiving a signal from the receiver indicating a selection of one of the at least two transmission channels based on channel performance at the receiver for each of the at least two transmission channels, wherein the channel performance is based on a combining technique different from the interference suppression technique; and

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communicating with the receiver using the selected one of the at least two transmission channels.

22. (new) A transmitter having at least two transmission channels in a wireless communication system, the transmitter communicating with a receiver having an adaptive array having at least two antennas to receive the signal and produce at least two received signals, wherein the receiver suppresses interference by applying an interference suppression technique when combining the at least two received signals, the transmitter comprising:

means for receiving a signal from the receiver indicating a selection of one of the at least two transmission channels based on channel performance at the receiver for each of the at least two transmission channels, wherein the channel performance is based on a combining technique different from the interference suppression technique; and

means for communicating with the receiver using the selected one of the at least two transmission channels.